



Sheet 1 of 5

FORM PTO-1449

DEPARTMENT OF COMMERCE

PATENT AND TRADEMARK OFFICE

## MATERIAL INFORMATION STATEMENT

(Use several sheets if necessary)

ATTY. DOCKET NO.  
OMRF128SERIAL NO.  
08/323,060APPLICANT  
Philip C. CompFILING DATE  
October 14, 1994

GROUP

1886 1816

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
RB)	AA	5,084,273	01/28/92	Hirahara	424	94.6	
RB)	AB	5,093,117	03/03/92	Lawrence, et al.	424	85.8	
	AC						
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	AH						
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	AJ						
	AK						

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
RB)	AL	WO 94/22470	10/13/94	PCT				
	AM							
	AN							
	AO							
	AP							

## OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)

RB)	AR	Bauer, K.A. and R.D. Rosenberg. "Congenital antithrombin III deficiency: insights into the pathogenesis of the hypercoagulable state and its management using markers of hemostatic system activation." <i>Am.J.Med.</i> 87:39S-43S (1989)
RB)	AS	Bauer, K.A. and R.D. Rosenberg. "Role of antithrombin III as a regulator of in vivo coagulation." <i>Semin.Hematol.</i> 28:10-18 (1991)
RB)	AT	Broze, G.J., Jr., et al. "The lipoprotein-associated coagulation inhibitor." <i>Prog.Hemost.Thromb.</i> 10:243-268 (1991)

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## OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)

MB1	AR	Broze, G.J., Jr., et al., "Regulation of coagulation by a multivalent Kunitz-type inhibitor," <i>Biochemistry</i> , 29:7539-7546 (1990)
MB1	AS	Chesebro, James H., et al., "Antithrombotic Therapy and Proression of Coronary Artery Disease," <i>Circulation</i> Supplement III, 86(6):III-100-III-110 (1992)
MB1	AT	Clouse, L.H. and Comp, P.C., "The regulation of hemostasis: The protein C system," <i>N. Engl. J. Med.</i> 314(20):1298 (1986)
MB1	AR	Comp, P.C. and Esmon, C.T., "Generation of fibrinolytic activity by infusion of activated protein C into dogs," <i>J. Clin. Invest.</i> 68:1221 (1981)
MB1	AS	Comp, P.C., et al., "Familial protein S deficiency is associated with recurrent thrombosis," <i>J. Clin. Invest.</i> 74:2082-2088 (1984)
MB1	AT	Comp, P.C., et al., "Activation of protein C in vivo," <i>J. Clin. Invest.</i> 70: 127-134 (1987)
MB1	AR	Comp, P.C., "Hereditary disorders predisposing to thrombosis," In B.S. Coller (Ed.), <i>Progress in Hemostasis and Thrombosis</i> , (New York: Grune and Stratton, 1986). Vol. 8, pp. 71-102
MB1	AS	Conway, F.M. and R.D. Rosenberg, "Tumor necrosis factor suppresses transcription of the thrombomodulin gene in endothelial cells," <i>Mol. Cell. Biol.</i> 8:5588-5592 (1988)
MB1	AT	Cooper, D.K.C., et al., "The Pig as Potential Organ Donor for Man," Chapter 30, 481-500
MB1	AR	Dahlback, B., "Interaction between vitamin K-dependent protein S and the complement protein, C4b-binding protein. A link between coagulation and the complement system," <i>Semin. Thromb. Hemost.</i> 10:139-148 (1984)
MB1	AS	Dahlback, B., "Inhibition of protein Ca cofactor function of human and bovine protein S by C4b-binding protein," <i>J. Biol. Chem.</i> 261:12022-12027 (1986)
MB1	AT	Dahlback, B., "Interaction between complement component C4b-binding protein and the vitamin K-dependent protein S. A link between blood coagulation and the complement system," <i>Scand. J. Clin. Lab. Invest. [Suppl]</i> 177:33-41 (1985)
MB1	AR	de Fouw, N.J., et al., "The cofactor role of protein S in the acceleration of whole blood clot lysis by activated protein C in vitro," <i>Blood</i> 67:1189-1192 (1986)
MB1	AS	Esmon, C.T., et al., "Interaction of thrombin with thrombomodulin," <i>Ann. N.Y. Acad. Sci.</i> 485: 215 (1986)
MB1	AT	Esmon, C.T., "The roles of protein C and thrombomodulin in the regulation of blood coagulation," <i>J. Biol. Chem.</i> 264(9): 4743 (1989)

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## OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)

RR	AR	Esmon, N.L., "Thrombomodulin," <i>Semin. Thromb. Hemost.</i> 13:454-463 (1987)
RR	AS	Flaherty, M.J., et al., "Iatrogenic immunization with bovine thrombin: A mechanism for prolonged thrombin times after surgery," <i>Ann. Int. Med.</i> 111: 631 (1989)
RR	AT	Flaherty, M.J. and Wener, M.H., "Antibodies to thrombin in postsurgical patients," <i>Blood</i> 73(5):1386 (1989)
RR	AR	Fulcher, C.A., et al., "Proteolytic inactivation of human factor VIII procoagulant protein by activated human protein C and its analogy with V," <i>Blood</i> 63:486-49 (1984)
RR	AS	Hillarp, A. and B. Dahlback, "The protein S-binding site localized to the central core of C4b-binding protein," <i>J. Biol. Chem.</i> 262:11300-11307 (1987)
RR	AT	Kirkman, Robert L., "Of swine and men: organ physiology in different species," <i>Xenograft</i> 25 Mark A. Hardy (Ed.), 1989 Elsevier Science Publishers (Biomedical Division)
RR	AR	Kisiel, W., et al., "Anti-coagulant properties of bovine plasma protein C following activation by thrombin," <i>Biochemistry</i> 16: 5824 (1977)
RR	AS	Kisiel, W., "Human plasma protein C: Isolation, characterization and mechanism of activation by alpha-thrombin," <i>J. Clin. Invest.</i> 64: 761 (1979)
RR	AT	Lentz, S.R., et al., "Regulation of thrombomodulin by tumor necrosis factor-alpha: comparison of transcriptional and post-transcriptional mechanism," <i>Blood</i> 77:542-550 (1991)
RR	AR	Marlar, R.A., et al., "Human protein C: inactivation of factors V and VIII in the activated molecule," <i>Ann. NY Acad. Sci.</i> 370:303-10 (1981)
RR	AS	Melissari and Kakkar, "Congenital severe protein C deficiency in adults," <i>Br. J. Haematol.</i> 72(2):222-228 (1989)
RR	AT	Menache, D., "Antithrombin III: introduction," <i>Semin. Hematol.</i> 28:1-2 (1991)
RR	AR	Miletich, J.P., "Laboratory diagnosis of protein C deficiency," <i>Semin. Thromb. Hemost.</i> 16(2):169 (1990)
RR	AS	Miletich, J., et al., "Absence of thrombosis in subjects with heterozygous protein C deficiency," <i>N. Engl. J. Med.</i> 317(16):991 (1987)
RR	AT	Moore, K., et al., "Endotoxin enhances tissue factor and suppresses thrombomodulin expression of human vascular endothelium in vitro," <i>J. Clin. Invest.</i> 79:124-130 (1987)

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RB/	AR	Moore, K.L., et al., "Tumor necrosis factor leads to the internalization and degradation of thrombomodulin from the surface of bovine aortic endothelial cells in culture Indianapolis," <i>Blood</i> 73:159-165 (1989)
DM	AS	Muller, James E., "Coronary Artery Thrombosis: Historical Aspects," <i>J. Am. Coll. Cardiol.</i> 1(3):893-896 (1983)
YAS	AT	Nawroth, P.P., et al., "Interleukin 1 induces endothelial cell procoagulant while suppressing cell-surface anticoagulant activity," <i>Proc. Natl. Acad. Sci. USA</i> 83:3460-344 (1986)
RB/	AR	Nawroth, P.P. and D.M. Stern, "Modulation of endothelial cell hemostatic properties by tumor necrosis factor," <i>J. Exp. med.</i> 163:740-745 (1986)
WM	AS	Owen, W.G. and Esmon, C.T., "Functional properties of an endothelial cell cofactor for thrombin-catalyzed activation of protein C," <i>J. Biol. Chem.</i> 256:5532 (1981)
RB/	AT	Preissner, K.T., "Biological relevance of the protein C system and laboratory diagnosis of protein C and protein S deficiencies," <i>Clin. Sci.</i> 78: 351, 1990
MS	AR	Rapaport, S.I., "Inhibition of factor VIIa/tissue factor-induced blood coagulation: with particular emphasis upon a factor Xa-dependent inhibitory mechanism 92013," <i>Blood</i> 73:359-365 (1989)
MS	AS	Rapaport, S.I., "The extrinsic pathway inhibitor: a regulator of tissue factor-dependent blood coagulation," <i>Thromb. Haemost.</i> 66 (1):6-15 (1991)
WM	AT	Snow, T.R., et al., "Protein C activation following coronary artery occlusion in the in situ porcine heart," <i>Circulation</i> 84:(1): 293 (1991)
RB/	AR	Stearns, D.J., et al., "The interaction of a Ca <sup>2+</sup> -dependent monoclonal antibody with the protein C activation peptide region. Evidence for obligatory Ca <sup>2+</sup> binding to both antigen and antibody," <i>J. Biol. Chem.</i> 263: 826-832 (1988)
RB/	AS	Stricker, R.B., et al., "Development of antithrombin antibodies following surgery in patients with prosthetic cardiac valves," <i>Blood</i> 72(4):1375 (1988)
RB/	AT	Taylor, F.B., et al., "Protein C prevents the coagulopathic and lethal effects of <i>Escherichia coli</i> infusion in the baboon," <i>J. Clin. Invest.</i> 79: 918 (1987)
WM	AR	Tripathi, A., et al., "Asymptomatic homozygous protein C deficiency," <i>Acta Haematol.</i> 83: 152 (1990)
WM	AS	Tuddenham, E.G., et al., "Homozygous protein C deficiency with delayed onset of symptoms at 7 to 10 months," <i>Thromb. Res.</i> 53: 475 (1989)
WB/	AT	Walker, E.J., "Protein C deficiency in liver disease," <i>Ann. Clin. Lab. Sci.</i> 20(2):106 (1990)

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Walker, F.J., Scandella, D. and Fay P.J., "Identification of the binding site for activated protein C on the light chain of factors V and VIII," <i>J. Biol. Chem.</i> 265(3):1484-89 (1990)	AR	
Walker, F.J., "Regulation of activated protein C by protein S. The role of phospholipid in factor Va inactivation," <i>J. Biol. Chem.</i> 256:11128-11131 (1981)	AS	
Walker, F.J., "Protein S and the regulation of activated protein C," <i>Semin. Thromb. Hemost.</i> 10:131-138 (1984)	AT	
Walker, F.J., "Interactions of protein S with membranes," <i>Semin. Thromb. Hemost.</i> 14:216-221 (1988)	AR	
Walker, F.J., et al., "Inactivation of factor VIII by activated protein C and protein S," <i>Arch. Biochem. Biophys.</i> 252:322-328 (1987)	AS	
Walker, F.J., "Regulation of activated protein C by a new protein. A possible function for bovine protein S," <i>J. Biol. Chem.</i> 255:5521-5524 (1980)	AT	
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